

## Description

# D.c's High Tech State of the Art Aluminum, 3-piece Collapsible Barrel Sprung Pool Cue With Adjustable Impact Rod and Tip

### DETAILED DESCRIPTION

[0001] detailed description of the housing or embodiment and inside workings turning now in detail to the appending drawings in detail and in particular to fig#7 is illustrated new age ,state of the art ,high-tech, telescoping ,trigger activated ,3peice,collapsible pool cue or stick equipped with an adjustable impact rod which contains a spring barrel tension mechanism that stores a variable amount of energy or kinetic energy which is encased or housed in the rear part of the stick that is used in the game of pool or billiards . this description is generally designated by reference numerals attached to the drawing in figure #7. Numbers 29 and 30 show the embodiment of the cue or

stick which is the first step, fig. #1.#1, in the birth of this new age, high-tech stick, that starts out with a solid round aluminum billet that is four and 1/2 feet long or customized to the preference of the prospective owner. the o.d of the billet is one and 1/4 inches. #32 shows where the second step of the process comes in where the billet is cut in two separate pieces and at the same spot that will be machine threaded at both ends with a male thread on one end, and female receiving end on the other to create a perfect seat when threaded together to complete the whole length and housing of the cue. #30 and #29 are now two separate pieces ready for the gun drilling process. each piece is drilled length wise with a gun drill bit, to bore a 1/8th inch hole or a 3/16ths hole perfectly through the center of each piece of aluminum this process assures that the meeting points of #30 and #29 are perfectly centered for the next process which entails machining threads at point a and point b of the stick as shown in fig. #7, #32 shown in fig, #7 is the center mating surface that when the two pieces are joined together it mates together a perfect flush straight rod when screwed together and tightened. #25 shows the male threaded end A of the center of the cue joined together with the female threaded

end B of the center of the cue joined together to make a perfect mating surface. the next step of the process is to have both #29 and #30 joined together and tight by the threaded area at points A and B and have a flush mating surface at #32 of fig. #7. At this point in the process both pieces of the aluminum rod or billet are mated as one solid stick or rod ready to be mounted pm a turning lathe to produce the gradual taper #33 from the rear of the stick to the front of the stick that produces a high quality machined or polished finish with a standard taper that is the same of all pool cues on the market that are made of wood, titanium or graphite or any other material used to fabricate pool cues. the rear part of the stick #31 that houses the spring barrel and tension mechanism. it has an o.d of 5/8ths of an inch that has a depth of 4 to 6 inches starting at the but end of the stick which is drilled out with a flat faced bore bit to ensure a #34 square taper at the tip of the bit and at the end of the aluminum when the desired drilling depth is attained. #35 of figure #7 is 1/2 inches in diameter and has a depth of 3/4ths deep of the existing metal #36 of fig. #7 is a 5/16ths hole drilled in the center of the 1/2 inch hole which housed #12 the trigger release mechanism. And a machined aluminum re-

tainer ring for the trigger release mechanism to keep it from backing out in fig. #4, #41. It also is a stopping point for the trigger so it only depresses so far and returns so far. At this point of the machining or fabrication process we have a hollow embodiment or housing that has been drilled machined and fabricated to certain specifications and or criteria to contain or house these specific moving parts. The first mechanism #20 and #21 that is aluminum is the impact rod which is a two piece rod that is threaded #26 and screwed together, the piece that is referred to in fig. #7,#13 the barrel spring mechanism which is machined our of a 3/4" piece of brass, that is approximately 3" long and has 4 slots machined throughout the length of it to accommodate the trigger on one end of the barrel it has a 1/4" threaded hole to accept the impact rod and on the other end it has a machined recess #40 to accommodate a riding washer for the spring for smooth twisting for the tension adjuster at the rear of the stick. The opposite end of the barrel has a spring #14, which is soldered or twisted into the opposite end of it to make it one complete piece and or changeable to the owners choice. At this point in the process we can now take the complete barrel spring and impact rod #21, #19, #27,

#14, and #13 and insert it through the rear of the stick #29. The next step in the process is to take #17 which is a solid 1/2 inch piece of brass or metal of choice that is pined through the aluminum, #28, on each side that has a 3/16ths or 1/8th inch hole through the center that has a fine thread, #37, before #37 is installed into the rear of the stick there is a fine threaded T-rod, #15 and #16, #15 being a 5/8ths in. diameter brass or aluminum plate that is 1/4th in. thickness, the complete piece #15 and #16, is screwed through or threaded into #17, the complete assembly is #15,16,17, and #28 are all installed into the rear end of the stick, #29, as one complete unit and pined #28 at this point the threaded T-rod is protruding outward from the end of the stick. #18 described as the tension adjustment coupler which can be pined or welded to the end of the threaded T-rod, #15 and #16 so it can be twisted counter clockwise or clockwise to adjust the amount of tension applied to the barrel spring #14 and #13 as one unit to store and create kinetic energy to be released when trigger #12 is depressed. The next step of the process is to install the tip #23, which has a 1/4th in., or 3/16ths in. hole machined in the rear part of the tip, #38, mounting area and inserts over the impact rod #21

and #19 so that the back side of the tip butts flush up against the front end of the stick, and in turn #22 is then installed which is a set pin to mount and make the impact rod and tip one. #24 is a 1/4th in. hole or 1/8th in. hole that is knurled to accommodate various different tips desired by the user: described as a quick change tip. The last part and piece to be installed is the trigger or button fig.#12. That is first installed by putting tension spring #11, inserted in space #35 where the trigger or button is housed the next step is to take the trigger or release button #12 and insert it into space #35 and depress it down over the tension spring #11. With the button held in its depressed mode, refer to fig.#4 part #41 is the retainer ring or keeper which is slid down the length of the stick into its permanent position to retain the button in its place. When the trigger is installed, fig. #12, it also drops down into the trigger cavity, #36, that drops down into the eye-hole of the barrel spring as shown in fig.#7 diagram B, #39, that keeps it in its cocked position until the trigger, #12, is depressed and actuates the barrel spring #14,13,19,21, and #23 which in turn, releases the stored kinetic energy desired by the user to move or impact balls in the game of billiards. Diagram B in fig.#7 is the detailed

drawing of the barrel spring mechanism showing the spoon shaped slotted eye-hole, that the trigger or release mechanism, #12, that slides forward and rearward in its cocked position and released position. Figure #8 shows all of the metals and certain moving parts used to make this unique pool-cue work properly.